

REMARKS

Claims 1-44, and 49-80 are pending in the application. Claims 1-10, 12-25, 27-44, 64-77, and 80 are allowed. Claims 45-48 have been canceled. Claims 49-60, 63, 78-79 have been rejected under 35 U.S.C. § 103(a). Claims 11, 26, 59, 61 and 62 have been objected to.

Claims 11, 26, 49, 52, 59, 61-62 have been amended in this response.

Claim Objections

Claims 11, 26 and 59 were objected to because of informalities. In particular, the Office states that the phrase "within 20%" should be changed to "within 20% of a given value". Applicants have amended claims 11, 26 and 59 accordingly.

Allowable Claims

Claims 1-44, 64-77 and 80 are allowed. Claims 61-62 were objected to as being dependent upon a rejected base claim, but were indicated as allowable by the Office if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants have rewritten claims 61-62 accordingly and these claims are now believed to be in a condition for allowance.

Rejections under 35 U.S.C. § 103(a)

Claims 49-60, 63, 78-79 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,843,657 to Liotta et al. (hereinafter "Liotta"). Applicants traverse this rejection. In order to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. MPEP §2143.

Independent Claims 49 and 63

With respect to claims 49 and 63, the Office refers the applicants to FIG. 2a-2c of Liotta.

In particular, the Office states as follows:

Liotta does not explicitly disclose the claimed transfer film carrier. However, Liotta's probe 5 (fig 2c) is used to carry the transfer film 6 (fig 2c) which performs the same function as the transfer film carrier.

Office Action, pg. 2. Applicants traverse this rejection. In order to establish a prima facie case of obviousness the prior art reference must teach or suggest all of the claimed limitations. MPEP §2143. To further clarify the invention, applicants have amended independent claim 49 such that the word "couple" has been replaced with the word "cap". Independent claim 63 already contains this limitation.

An advantage of the present invention is that the carrier is an integral portion of the analysis vessel. As an integral portion of the analysis vessel, the carrier not only couples with the analysis vessel but it also caps it closed. As such, the carrier of the present invention transfers sample as well as caps the analysis vessel and thereby, facilitates the process and reduces the entire processing time. Nothing in Liotta discloses, teaches or suggests using the same transfer film carrier to also cap the analysis vessel. In Liotta, the probe 5 is not a carrier that caps the analysis vessel. In contrast, the probe in Liotta is a glass pipette. Liotta, col. 5, lines 55-56. Also, the probe in Liotta is a hollow suction probe with a sharp annular tip by which sample zones could be punched out and extracted by suction forces. Liotta, col. 6, lines 22-28. Liotta teaches away from using a carrier that caps the analysis vessel by employing glass pipettes and suction probes as the carrier without any further disclosure or suggestion to employ the same instruments to cap the analysis vessel. Capping the analysis vessel with the same carrier that is also used for sample transfer is not disclosed, taught or suggested in the prior art, nor is it obvious to one skilled in the art to modify Liotta. For these reasons, these claims are in a condition for allowance.

Furthermore, in Liotta, once the sample has been transferred to the analysis vessel, the probe such as a glass pipette or suction probe would have to be removed from the analysis vessel and then the analysis vessel capped with a separate cap if it is desired to shake the analysis vessel or to contain the contents of the analysis vessel while it is disposed in a centrifugation device. In the present invention, the carrier saves a step in the process because *the carrier of the present invention introduces the sample in the analysis vessel and also caps the analysis vessel closed in the same step*. This feature facilitates the process and reduces the time involved. This feature is not anticipated nor made obvious in Liotta. Therefore, the claims 49 and 63 and their respective dependent claims are nonobvious and in a condition for allowance.

Dependent Claims 51

With respect to claim 51, applicants believe that the third criterion listed above is not met and maintain that the prior art references do not disclose, teach or suggest all the claim limitations of claim 51. The third criterion states that the prior art references must teach or suggest all of the claim limitations in order to establish a prima facie case of obviousness. MPEP § 2143. Claim 51 recites a scattering media in proximity to the laser capture microdissection transfer film. Liotta does not disclose, teach or suggest a scattering media according to claim 51.

The Office states that the limitations of a scattering media involve only routine skill in the art. Applicants disagree. The scattering media can be incorporated in several locations. For example, the scattering media can be incorporated in the optical train or elsewhere in the system and separate from the carrier. However, the carrier cap advantageously serves several functions at once. One such function is the capability of including the carrier on a microscope stage as well as including a scattering media in a carrier. This limitation is not disclosed, taught or suggested in Liotta. Therefore, this claim is not obvious and in a condition for allowance.

Dependent Claims 52

With respect to claim 52, the Office states as follows:

Liotta does not explicitly disclose a transfer film contains an absorptive substance. However, the claimed limitation would have been obvious because the transfer film is made from a certain material and it would have been obvious that each different material would absorb a certain wavelength.

Office Action, pg. 3. Applicants agree that a certain materials will absorb energy. Applicants have amended claim 52 to clarify the invention such that an absorptive substance is added in addition to the base material of which the transfer film is composed. Examples of absorptive substances so added to the base material include dyes or Fullerine particles. As amended, applicants believe that dependent claim 52 is nonobvious and in a condition for allowance.

Dependent Claims 55, 56 and 57

Limitations of (1) a negative draft (2) a girdle and (3) a chamfer of dependent claims 55, 56 and 57, respectively, are all structural limitations that are not disclosed, taught or suggested in Liotta. The prior art reference must teach or suggest all of the claim limitations. MPEP §2143. The suggestion or motivation to combine reference teachings or to modify a reference can be found in one having ordinary skill in the art but not the limitations themselves which must be taught or suggested in the prior art reference. Nothing in Liotta discusses forming a carrier having a negative draft, a girdle or a chamfer. These structural features serve advantageous functions such as permitting air to escape while the carrier is capping the analysis vessel or providing a surface against which the analysis vessel and carrier can seal to prevent fluid from escaping. Liotta does not disclose, teach or suggest using a carrier to cap and seal an analysis vessel and therefore, there is certainly a lack of teaching, suggestion or motivation to further incorporate the additional structural features of a girdle, negative draft and chamfer. Therefore, these claims are non-obvious and in a condition for allowance.

Dependent Claim 54

Dependent claim 54 includes the limitation of bonding the transfer film to the carrier with a refractive index matching transparent glue. This limitation is a structural limitation which is not disclosed, taught or suggested in Liotta. The carrier cap of the present invention advantageously serves several functions such as (1) being small enough to be placed on a microscope stage, (2) being transparent such that the sample can be viewed through the cap while on the microscope stage, (3) having a diffuser integrated in the carrier so that the microscopic image is adequately illuminated, (4) being shaped so that it can be handled by an automated system, and (5) being adapted to cap an analysis vessel. All of these advantages are found in the structural limitations included in the claims. For example, since the carrier is designed to be inserted into a microscope as well as to cap an analysis vessel, an index-matching transparent glue is used to bond the transfer film. This limitation is not disclosed, taught or suggested in Liotta and there is no motivation in Liotta to modify its disclosure. Therefore, these claims are nonobvious and allowable.

Dependent Claims 78 and 79

Dependent claims 78 and 79 include the limitations of (1) a sealing feature that excludes a portion of the transfer film carrier from the interior of the analysis vessel and (2) an internal ridge adapted to contact a portion of the transfer film carrier, respectively. The Office states that

[I]t would have been obvious to modify Liotta's vessel with a sealing feature or an internal ridge as claimed for providing a better control of the sample.

Office Action, pg. 4. Applicants traverse this rejection. First, nothing in Liotta discloses, teaches or suggests sealing the vessel shown in FIG. 2c. In fact, as discussed above with respect to claims 49 and 63, Liotta teaches away from sealing the vessel by employed probes that are glass pipettes and suction devices. There is no disclosure, suggestion or motivation in Liotta to seal the analysis vessel with the sample carrier and much less to seal these types of probes inside the analysis vessel. Furthermore, the sealing feature in claim 78 requires the sealing feature to

exclude a portion of the transfer film from the interior of the vessel. Liotta is silent with respect to this limitation as well as with the limitation of claim 79 which requires an internal ridge. There are advantages associated with these limitations such as the exclusion of non-specifically transferred material that would otherwise contaminate the analysis vessel if not excluded therefrom. Because these limitations are not disclosed, taught or suggested in the prior art, these claims are in a condition for allowance.

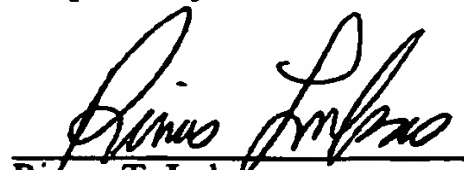
In view of the foregoing remarks, applicants respectfully submit that the application is in a condition for allowance, and action toward that end is earnestly solicited. The Office is invited to contact the applicant's representative at the number below to facilitate prosecution of this application.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief are required, applicant petitions for any required relief including extensions of time.

Respectfully submitted,

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